



## **MGT 522/GLBL 522:**

### **Behavioral Strategies for Selling New Products in Emerging Markets**

Spring 2014 Syllabus

MW 10.10-11.30am, Evans 2200

Professor A. Mushfiq Mobarak

Evans 3502

[ahmed.mobarak@yale.edu](mailto:ahmed.mobarak@yale.edu)

203-432-5787

Office Hours: Mondays 2:30-3:30pm or by appointment

TA: Meg Watkins, [meg.watkins@yale.edu](mailto:meg.watkins@yale.edu)

## **Course Overview**

This course will focus on the consumption behavior of the poor in developing countries. The design of the course is inspired by the observation that the poor are often unwilling to invest in new products, behaviors and technologies that (we think) are apparently welfare-enhancing. This suggests that either we need to re-visit our assumptions, or that we need to better understand the constraints facing the poor, both rational and ‘behavioral’ or psychological. These constraints may in turn suggest the design of marketing strategies to help poor consumers overcome these sources of aversion to behavior change. The course should therefore be of interest to both aspiring development economists and those seeking to work on marketing problems for emerging markets. We will draw heavily on state-of-the-art evidence generated from the recent spate of randomized controlled trials conducted in developing countries to better understand the behaviors and constraints of poor citizens, in an attempt to answer fundamental questions about ‘what works’ in development. The course will therefore teach students about empirical inference from randomization evaluations, and other related experimental and statistical methods. The course will be heavy on statistical inference, and is being taught by an economist who primarily conducts empirical economics research using econometric methods. Some background in statistics and econometrics will therefore be very helpful.

## **Course Structure**

### **Part I: The Nature of Consumer Demand among the Poor**

This segment of the course is designed to help set the stage for the marketing challenges that will follow. We will learn about conditions and constraints that restrict consumption among the poor. The key constraint, as you might imagine, is that the poor don’t have resources. But this simple statement requires further exploration: even if the poor do not have liquidity on hand, why is it that they cannot save or borrow to consume? Careful economic thinking suggests that the answer cannot be mechanical – if some types of consumption (or investment) is productive in the long-run, then the poor, like you and I, should be willing to borrow or dis-save to consume or invest now, and use the extra productivity gained to pay back in the future. If this is indeed efficient,

then a credit market and savings products should develop to meet these needs even when the poor are liquidity constrained. Under what conditions does this not happen? Is it a market failure, some other failure on the supply side, or is the problem that demand is too low?

This part will also introduce you to impact evaluation and other methods for data analysis and inference, because we will draw on the state-of-the-art empirical research on these questions conducted using such techniques for the entire semester. The methodological grounding is therefore necessary preparation.

## **Part II: The Marketing Challenge: Sources of Aversion to Behavior Change**

If we believe that the poor should be consuming or investing in some things – like education, preventative health products, insurance, improved agricultural inputs – then why are they reluctant to invest in these products? If we strongly believe the product (or behavior change) to be welfare-enhancing, and something that will pay for itself through increased productivity, then there must be some constraint preventing this investment, or there may be other features of the market or product that we need to think about carefully. Each lecture will explore various sources of aversion to behavior change in turn – risk aversion, externalities and demand inter-linkages, pre-existing substitute solutions, discordance in preferences between husbands and wives, failures of information and communication, present-biased preferences, habits, and simply, bad product design. Identifying these constraints sets up “targets” for marketing, which gives us ample opportunities to discuss marketing strategies in response to each constraint.

## **Class Preparation**

### **Readings:**

In the reading list below, you will find a few chapters assigned from the following book:

Abhijit Banerjee and Esther Duflo, *Poor Economics*.

This is an easy book to procure: most online sellers (e.g. Amazon.com) carry it.

For each lecture, there will be a set of assigned readings, which are mostly economics research papers. It is essential that you read these materials prior to class. The papers are either published in journals that Yale University subscribes to almost without exception, or they are working papers. If you happen to find yourself off-campus and cannot dial-in through VPN, you should be able to google the paper title and author names and at least find (earlier) working paper versions of the published articles. I will upload the readings are loaded onto the course pages in the classesv2 server if possible, subject to copyright restrictions.

### **Assignments:**

I will hand out **one homework assignment** both to help guide your reading and to practice analytic concepts. The homework assignment will be graded. There will also be a **mid-term exam** and a **final group project**.

## Assessments and Grading

The grade is made up of four components:

**1. Midterm Exam (30%):** The midterm will be a closed book/closed notes in-class exam, given during regular class time. It will consist of short answer questions, and will cover all lectures, cases, and readings from the first half of the course.

**2. Homework (15%)**

**3. Group Project (30%):** This project will give you and your group a chance to explore an area of special interest. There are two options for satisfying the group project requirement:

- a) **Develop a “funding proposal”** written to a donor or private firm (or its foundation) that proposes a specific product or behavior that you would like to market to consumers in a developing country. The proposal should specify:
- The product, technology or behavior, and why you think it is valuable to promote (citing, for example, proof-of-concept or laboratory studies or field tests that indicate promise).
  - Your hypotheses on the key challenges that are currently preventing widespread adoption. If the product is attractive, why has it not already taken off? Why does it need to be marketing or promoted?
  - Background information that supports the fact that your hypotheses are sensible
  - Your marketing strategies in response to those challenges.
  - An operational model that implements your marketing strategies. What is your business/nonprofit model? Are there supplier and partnerships needed? What logistics are involved in distributing your product or service to the customer?
  - Design of a research study that will help you rigorously evaluate the effectiveness of your marketing strategies, and inform the donor on how to proceed with this in large scale. A well designed research study will comment on required sample size (supported by power calculations if possible), and explain how the experimental (or non-experimental) design will rigorously evaluate your hypotheses and answer the research question that is posed.

The final proposal should be approximately 10-12 pages in length (1.5 spaced, 12 point font size, ordinary margins) not including appendices, which may include up to 8 tables, graphs, and exhibits. The final output will be due on the final day of class.

- b) Develop a **Seed capital proposal to submit to D-Prize** (See [www.D-Prize.org](http://www.D-Prize.org) for more information on the organization)

This option is for groups who want to launch a venture in this class. The final output is a detailed funding proposal to be submitted to D-Prize, an organization which offers \$10-\$20,000 in seed capital for new ventures. D-Prize will evaluate these proposals in conjunction with Professor Mobarak.

To qualify for funding, the specific product or behavior that you market to developing world consumers must have (1) proven impact, and (2) be cost-effective. Impact may be proven through published results of randomized control trials, economic studies, or other peer-reviewed

studies. Cost-effectiveness is often calculated and quantified using metrics like *cost-per-QALY* or *cost-per-DALY*.

One key difference between options (a) and (b) for the group project is (a) should focus on presenting a research design to evaluate the marketability of a *promising* (but not necessarily '*proven*', yet) product or idea, whereas (b) should develop the operational details of your plans to popularize a proven idea.

The D-Prize seed proposal should specify:

- Data and studies supporting “proven impact” and “cost effectiveness”.
- Your hypotheses on the key challenges that are currently preventing widespread adoption, and your marketing strategies in response to those challenges.
- An operational model that implements your marketing strategies. What is your business/nonprofit model? Are there supplier and partnerships needed? What logistics are involved in distributing your product or service to the customer? Etc.
- Identification of a pilot location, including the specific region and description of the population segments you will serve.
- An organization chart, including roles and specific people, of your venture during the pilot phase and after 2 years of growth. A description of key team members and their qualifications is encouraged.
- Description of monitoring and evaluation (M&E) practices within your organization that will help you rigorously evaluate the effectiveness of your marketing strategies and operations, including milestones to meet in 3 months, 1 year, and 2 years.
- A budget of 10-15 major line items, forecasting costs out for 3 months, 1 year, and 2 years.
- A description of how you plan to raise capital after the pilot.

The proposal should be approximately 15 pages in length (1.5 spaced, 12 point font size, ordinary margins) not including appendices, which may include up to 8 tables, graphs, and exhibits. The final output will be due on the final day of class.

### **Key Project Deadlines**

#### Session 6

Provide list of group members

#### Session 10

1-2 page concept note (15% of project grade)

Description will define firm or other organization, country or countries, and strategic question of interest. Description will also define sources of facts, data, etc that will allow your group to produce a careful and textured analysis.

Professor Mobarak will meet one-on-group to provide feedback (Feb 20)

Teams that opt for the D-Prize seed proposal can refine the 1-2 pager, and submit a 3-page concept note to D-Prize’s first competition round (deadline: March 30). Instructions on submitting to D-Prize can be found here: [http://www.d-prize.org/First\\_Round\\_Application\\_Packet.pdf](http://www.d-prize.org/First_Round_Application_Packet.pdf)

#### Session 20

Five-page report draft (35% of project grade)

Professor Mobarak will meet one-on-group to provide feedback (April 22)

Teams that opt for the D-Prize seed proposal should submit their final proposal by April 30. Teams will receive instructions from the organization on submitting to D-Prize following submission to the first round.

**4. Class Participation (25%):** Attendance, preparation, and participation are essential. Obviously, you cannot participate if you are not present, so absences without legitimate excuses will lead to a reduced participation grade. Learning opportunities are maximized when all students are actively engaged in class discussion. The subject matter of this class should naturally stimulate a lot of discussion, and I am eager to have an active dialogue. Particularly valuable types of participation will be those that move the discussion forward, often by adding useful facts to the discussion or by providing a new insight on the issue at hand. Requests to clarify concepts being presented are also encouraged of course. If you are confused by something, then other people are probably confused as well, and participation that seeks to clarify an idea will likely be valuable for the whole class. Please note that like many other economics classes, this class will sometimes discuss very precise concepts, methodologies or frameworks, and the questions I pose to you will have precise correct answers and potentially a bunch of imprecise or incorrect answers. Years of teaching experience has taught me that it is useful for the group if I clearly label the incorrect or imprecise answers as such during class. This will in no way be an under-handed effort to pick on you, and I will give you my honest opinion of your answer only for our collective pedagogical benefit. The TA will help me keep track of class participation in a structured manner.

I reserve the right to call on people on occasion, and respond to multiple hands raised in such a way so as to create a more equitable distribution of “podium time” across students.

There will be ample opportunity for each of you to participate. Do not be discouraged if, after the first few classes, you have yet to participate much. If you feel that you are preparing well but not being called on enough, please let me know so that I can address the problem. And please realize that as long as you have invested quality time in the readings and worked through the questions, you will almost certainly have valuable contributions to make during the discussion.

I realize that many of you like taking notes on your laptops. To minimize distractions, please do not use your laptop during the class for any purpose other than those directly relevant for this course. No emailing, web browsing, chatting, social networking. I would like to let you use your laptop for note-taking, and in return I just ask that you turn off instant messaging, chatting, email and non-class-related browsing features during the class period. Please remember that your browsing and chatting can be distracting for others around you, even if you feel that you can multi-task.

## **Course Webpage and Posted Materials**

Electronic copies of course materials, including reading assignments, lecture slides and homework assignments will be placed on the classesv2 site.

Please note that the slides posted on classesv2 will not be complete, and you are required to attend class and take notes in order to fill in the incomplete slides based on class discussion. Some slides may be missing altogether, so there is no good substitute for attending the classes and taking good notes.

## Course Outline

*Note: This is a relatively new course, and the course draws on state-of-the-art research in development economics, and the results of these studies are evolving.. For these reasons, the reading list may evolve slightly during the course of the semester. Please check back often on classesv2 throughout the semester for updated list of readings.*

### **Part I: The Nature of Consumer Demand among the Poor** (about one-third of the course)

#### **Session 1: Introduction to Class. The Problem of Low Demand**

Jan 13

##### **Readings:**

1. “Sure, we can build a better toilet, but will people use it?” *Wired Science News*, August 17, 2012, <http://www.wired.com/wiredscience/2012/08/gates-foundation-toilets/>

#### **Session 2,3, 4, 5: Randomized Controlled Trials and Other Impact Evaluation Methods**

Jan 15, 17, 22 27

Presentation by D-Prize on Jan 22

##### **Readings:**

1. S. Khandker, G. Koolwal, H. Samad (2010). *Handbook on Impact Evaluation: Quantitative Methods and Practices*, World Bank. Chapters 2,3,5,6,7. Can be downloaded from <http://go.worldbank.org/OUFYCCQG50>
2. Angus Deaton, “Instruments of Development,” [www.nber.org/papers/w14690](http://www.nber.org/papers/w14690)
3. E. Duflo, R. Glennerster and M. Kremer (2008). “Using Randomization in Development Economics Research,” <http://www.nber.org/papers/t0333.pdf>

#### **Session 6 and 7: Liquidity Constraints and Prices**

Jan 29, Feb 3

**Due on Jan 29:** List of group members for group project (at the beginning of class)

##### **Readings:**

1. “The Price is Wrong,” JPAL Bulletin April 2011
2. Clair Null et al, “Willingness to Pay for Cleaner Water in Less Developed Countries: Systematic Review of Experimental Evidence,” International Initiative for Impact Evaluation (3ie) *Systematic Review 006*
3. Cohen, J. and P. Dupas (2010). “Free Distribution or Cost-Sharing? Evidence from a randomized malaria experiment,” *Quarterly Journal of Economics* 125(1): 1-45. <http://www.stanford.edu/~pdupas/CohenDupas.pdf>

4. N. Ashraf, J. Berry, J. Shapiro, "Can Higher Prices Stimulate Product Use? Evidence from a Field Experiment in Zambia," *American Economic Review* December 2010.  
<http://www.arts.cornell.edu/econ/jwb295/clorin.pdf>
5. A. M. Mobarak, P. Dwivedi, R. Bailis, L. Hildemann and G. Miller. "The Low Demand for New Cookstove Technologies," *Proceedings of the National Academy of Sciences* 109(27): 10815-20

### **Sessions 8 and 9: Credit Constraints, Asymmetric Information and Market Failures**

Feb 5, 10

#### **Readings:**

1. Aleem, "Imperfect Information, Screening, and the Costs of Informal Lending: A Study of a Rural Credit Market in Pakistan," *World Bank Economic Review* 4(3): 329-349
2. Banerjee, Abhijit, E. Duflo, R. Glenester, C. Kinnan, "The miracle of microfinance? Evidence from a randomized evaluation," Working Paper, MIT
3. "[Microcredit Pioneer Ousted, Head of Bangladeshi Bank Says](#)" *New York Times*, March 2, 2011.

### **Session 10, 11: Savings Constraints**

Feb 12, 17

**Due on Feb 12: One-page overview of group project (at the beginning of class)**

#### **Readings:**

1. Dupas, P and J Robinson, 2013. "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya," *AEJ: Applied Economics* 5(1), pp. 163-92.  
<http://www.stanford.edu/~pdupas/SavingsConstraints.pdf>
2. Nicholas Kristof, "Sparking a Savings Revolution," *New York Times* December 31, 2009
3. P. Jakiela and O. Ozier, 2012. "Does Africa Need a Rotten Kin Theorem? Experimental Evidence from Village Economies," [http://pamjakiela.com/jakielaozier\\_20121106c.pdf](http://pamjakiela.com/jakielaozier_20121106c.pdf)
4. Why Don't the Poor Save More? Evidence from Health Savings Experiments (with Jonathan Robinson) Forthcoming, *American Economic Review*  
[http://www.stanford.edu/~pdupas/DupasRobinson\\_HealthSavings.pdf](http://www.stanford.edu/~pdupas/DupasRobinson_HealthSavings.pdf)

### **Session 12: Conditional and Unconditional Cash Transfers**

Feb 19

**Due on Feb 19: Homework 1 (at the beginning of class)**

#### **Readings:**

1. Abhijit Banerjee and E. Duflo, *Poor Economics*, Public Affairs Press, 2011. [Chapter 1](#).
2. S. Baird, C. McIntosh and B. Ozler, "Cash or Condition? Evidence from a Cash Transfer Experiment," *Quarterly Journal of Economics* 2011.
3. "Cash to the Poor: Pennies from Heaven," *The Economist*, October 26, 2013

**Feb 20: one-on-one meetings with each group about 1 pagers**

### **Session 13: Are the Key Constraints on Demand or Supply? Focus on Education**

Feb 24

**Readings:**

1. Abhijit Banerjee and E. Duflo, *Poor Economics*, Chapter 4.
2. R. Heath and A. M. Mobarak, “Does Demand or Supply Constrain Investments in Education? Evidence from Garment Sector Jobs in Bangladesh”  
<http://faculty.som.yale.edu/mushfiqmobarak/garments.pdf>
3. David Atkin, “Endogenous Skill Acquisition and Export Manufacturing in Mexico,”  
[http://www.econ.yale.edu/~da334/Endogenous\\_Skill\\_Acquisition\\_Mexico.pdf](http://www.econ.yale.edu/~da334/Endogenous_Skill_Acquisition_Mexico.pdf)

**Part II: The Marketing Challenge: Sources of Aversion to Behavior Change** (about half the course)**Session 14: Information Failures**

Mar 24

**Readings:**

1. Jensen, Robert (2010). “The (Perceived) Returns to Education and the Demand for Schooling,” *Quarterly Journal of Economics*, 125(2), p. 515-548.
2. Jensen, Robert (2012). “Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India,” *Quarterly Journal of Economics*, 127(2), p. 753-792.

**Session 15: Communication, Extension and Learning**

Mar 26

**Readings:**

1. Udry, C. “Learning about a New Technology – Pineapples in Ghana,” *American Economic Review* [www.econ.yale.edu/~udry/pdf/aercycle3.pdf](http://www.econ.yale.edu/~udry/pdf/aercycle3.pdf)
2. A. BenYishay and A. M. Mobarak, “Communicating with Farmers through Social Networks,”
3. Adhvaryu, A. “Learning, Misallocation, and Technology Adoption: Evidence from New Malaria Therapy in Tanzania,” [http://www.yale.edu/adhvaryu/adhvaryu\\_learning.pdf](http://www.yale.edu/adhvaryu/adhvaryu_learning.pdf)

**Session 16: Risk Aversion**

Mar 31

**Readings:**

1. G. Bryan, S. Chowdhury and A. M. Mobarak. “Seasonal Migration and Risk Aversion: Experimental Evidence from Bangladesh.”  
<http://faculty.som.yale.edu/mushfiqmobarak/migration.pdf>
2. The Economist, May 12, 2012. “[Hope Springs a Trap: An Absence of Optimism Plays a Large Role in Keeping People Trapped in Poverty.](#)”
3. Dupas, P. “Short-Run Subsidies and Long-Run Adoption of New Health Products: Evidence from a Field Experiment,”  
<http://www.stanford.edu/~pdupas/Subsidies&Adoption.pdf>

**Session 17: MIDTERM EXAM**

April 2



## Sessions 18 and 19: Demand for Insurance and Spillover Effects

April 7, 9

### Readings:

1. A. M. Mobarak and M. Rosenzweig. "Informal Risk Sharing, Index Insurance, and Risk-Taking in Developing Countries"  
<http://faculty.som.yale.edu/mushfiqmobarak/insuranceAEA.pdf>
2. Cole, Shawn A., X. Gine, J. Tobacman, P. Topalova, R. Townsend, and J. Vickery. "Barriers to Household Risk Management: Evidence from India." *American Economic Journal: Applied Economics* (forthcoming).
3. Kinnan, C. "Distinguishing barriers to insurance in Thai villages,"  
<http://faculty.wcas.northwestern.edu/~cgk281/BtI.pdf>

## Session 20: Present-Biased Preferences

April 14

### Readings:

1. Duflo, Kremer and Robinson, "Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya," *American Economic Review* 101 (6): 2350-2390.  
[http://people.ucsc.edu/~jmrtwo/fertilizer\\_behavioral.pdf](http://people.ucsc.edu/~jmrtwo/fertilizer_behavioral.pdf)
2. Ashraf, Karlan and Yin, "Tying Odysseus to the Mast: Evidence From a Commitment Savings Product in the Philippines," *Quarterly Journal of Economics* 2006
3. Bryan, Gharad. "Ambiguity and Insurance"

**Due:** Five-page draft of group project (at the beginning of class)

## Session 21: Habit Formation

April 16

### Readings:

1. "Warning: Habits May be Good for You," *The New York Times* July 13, 2008.
1. "Habits formed early in life may affect the gains that consumers make from trade," *The Economist*, September 23, 2010.  
<http://www.econ.yale.edu/~da334/Economics%20focus%20%20The%20Marmite%20effect%20%20%20The%20Economist.htm>
2. B. Verplaken and Wendy Wood, "Interventions to Break and Create Consumer Habits," *Journal of Public Policy and Marketing* 2006.  
<http://dornsife.usc.edu/wendywood/research/index.cfm>

## Session 22: Externalities and Demand Inter-linkages

April 21

### Readings:

1. "More Indians Have Mobile Phones Than Toilets," *Energy Alternatives India*, November 25, 2010.
2. Kremer and Miguel, "Worms," *Econometrica*, 2004, 72 (1), 159-217  
[http://elsa.berkeley.edu/~emiguel/pdfs/miguel\\_worms.pdf](http://elsa.berkeley.edu/~emiguel/pdfs/miguel_worms.pdf)
3. Kremer and Miguel, "The Illusion of Sustainability," *Quarterly Journal of Economics*, 2007, 112(3), 1007-1065 [http://elsa.berkeley.edu/~emiguel/pdfs/miguel\\_illusion.pdf](http://elsa.berkeley.edu/~emiguel/pdfs/miguel_illusion.pdf)

**April 22: One-on-one meetings about 5-pagers**

**Session 23: Intra-household Decision-making**

April 23

**Readings:**

1. G. Miller and A. M. Mobarak, “Intra-household Externalities and Low Demand for a New Technology: Experimental Evidence on Improved Cookstoves,”
2. Ashraf, Field and Lee, “Household Bargaining and Excess Fertility: An Experimental Study in Zambia,”
3. Grant Miller, “Contraception as Development? New Evidence from Family Planning in Colombia” *Economic Journal* 120(545): 709-736, 2010.
4. Abhijit Banerjee and E. Duflo, *Poor Economics*, Chapter 5.

**Session 24: Synthesis: Marketing Strategies and Product Design**

April 28

**Readings:**

1. “What Cookstoves Tell us about the Limits of Technology,” *The Washington Post*, May 8, 2012. [http://www.washingtonpost.com/blogs/wonkblog/post/what-cook-stoves-tell-us-about-the-limits-of-technology/2012/05/08/gIQApp8YAU\\_blog.html](http://www.washingtonpost.com/blogs/wonkblog/post/what-cook-stoves-tell-us-about-the-limits-of-technology/2012/05/08/gIQApp8YAU_blog.html)
2. Miller and Mobarak, “Learning about New Technologies through Opinion Leaders and Social Networks: Experimental Evidence on Non-Traditional Stoves In Rural Bangladesh.” *Marketing Science* 2014
3. “The Play Pump: What went Wrong?” *State of the Planet Blog*, July 1, 2010. <http://blogs.ei.columbia.edu/2010/07/01/the-playpump-what-went-wrong/>
4. Dhaliwal, Duflo, Glennerster, Tulloch, “Comparative Cost-Effectiveness Analysis to Inform Policy in Developing Countries,” <http://www.povertyactionlab.org/publication/cost-effectiveness>
5. Clemens, “Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?” *Journal of Economic Perspectives* 25 (3): 83-106. Summer 2011
6. Mobarak, Rainwater Storage Device Evaluation in Uganda

**Session 25 and 26: Student Presentations of Group Projects**

April 30 and May 5

**Due on May 6: Final report and presentations of group projects**